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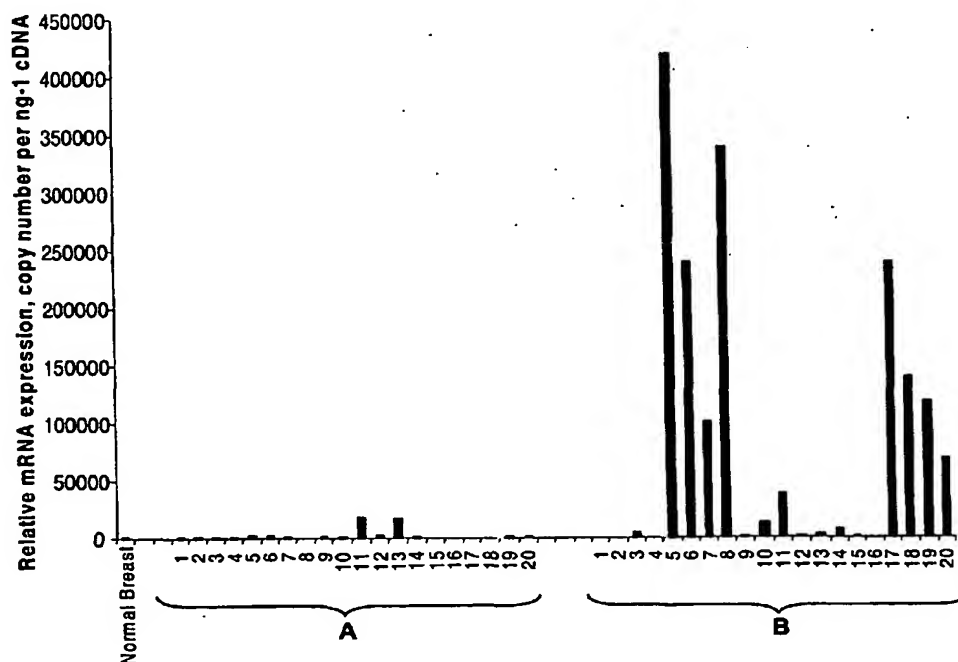
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- Published:
— with international search report

[Continued on next page]

(54) Title: **PTK7 PROTEIN INVOLVEMENT IN CARCINOMA**



(57) Abstract: The present invention provides a polypeptide, PTK7, of use in the treatment and/or prophylaxis of carcinoma. Also provided are agents which interact with or modulate the expression or activity of the polypeptide, methods for the identification of such agents and the use of PTK7 in the diagnosis of carcinoma.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
8 April 2004

INTERNATIONAL SEARCH REPORT

Intern: Application No
PCT/GB 03/03421

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K39/395 A61K38/17 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, BIOSIS, EMBASE, SEQUENCE SEARCH

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96 37610 A (MAX PLANCK GESELLSCHAFT) 28 November 1996 (1996-11-28) the whole document	1-25
X	MOSSIE K ET AL: "COLON CARCINOMA KINASE-4 DEFINES A NEW SUBCLASS OF THE RECEPTOR TYROSINE KINASE FAMILY" ONCOGENE, BASINGSTOKE, HANTS, GB, vol. 11, no. 10, 16 November 1995 (1995-11-16), pages 2179-2184, XP000605662 ISSN: 0950-9232 page 2182, column 1, paragraph 2 page 2184, column 1 -column 2 --- -/--	1-25

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

27 January 2004

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INTERNATIONAL SEARCH REPORT

Internat Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>FORUS ANNE ET AL: "Microarray-based analysis of gene activity patterns in osteosarcoma" PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH ANNUAL, vol. 42, March 2001 (2001-03), page 428 XP001157033 92nd Annual Meeting of the American Association for Cancer Research; New Orleans, LA, USA; March 24-28, 2001, March, 2001 ISSN: 0197-016X abstract</p> <p>---</p>	1-25
A	<p>PARK S-K ET AL: "CHARACTERIZATION OF THE HUMAN FULL-LENGTH PTK7 CDNA ENCODING A RECEPTOR PROTEIN TYROSINE KINASE-LIKE MOLECULE CLOSELY RELATED TO CHICK KLG1" JOURNAL OF BIOCHEMISTRY, JAPANESE BIOCHEMICAL SOCIETY, TOKYO, JP, vol. 119, no. 2, 1996, pages 235-239, XP000605383 ISSN: 0021-924X abstract</p> <p>---</p>	1-25
A	<p>LEE S-T ET AL: "A SURVEY OF PROTEIN TYROSINE KINASE MRNAS EXPRESSED IN NORMAL HUMAN MELANOCYTES" ONCOGENE, BASINGSTOKE, HANTS, GB, vol. 8, 1993, pages 3403-3410, XP002016719 ISSN: 0950-9232 abstract</p> <p>---</p>	1-25
A	<p>EASTY DAVID J ET AL: "Loss of expression of receptor tyrosine kinase family genes PTK7 and SEK in metastatic melanoma" INTERNATIONAL JOURNAL OF CANCER, vol. 71, no. 6, 1997, pages 1061-1065, XP002268012 ISSN: 0020-7136 abstract</p> <p>---</p>	1-25
P, X	<p>WO 02 099062 A (CASMAN STACIE J; LI LI ; ZHONG MEI (US); CURAGEN CORP (US); ANDERSON) 12 December 2002 (2002-12-12) page 409 -page 410</p> <p>-----</p>	1-25

INTERNATIONAL SEARCH REPORT

Int'l application No.
PCT/GB 03/03421

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claimss 1,13,14 relate to a products defined by reference to a desirable characteristic or property, namely "an agent which interacts with or modulates the expression or activity of a PTK7 polypeptide". The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT for only a very limited number of such products. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the product by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for the parts relating to PTK7, an antibody against PTK7 and to a vaccine derived from PTK7.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

Information on patent family members

Internal

Application No

PCT/GB 03/03421

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9637610	A	28-11-1996	AU 6238696 A	11-12-1996
			WO 9637610 A2	28-11-1996
WO 02099062	A	12-12-2002	WO 03000842 A2	03-01-2003
			WO 02098900 A2	12-12-2002
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			US 2003235821 A1	25-12-2003
			WO 03029423 A2	10-04-2003
			WO 03029424 A2	10-04-2003
			WO 02099116 A2	12-12-2002
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			US 2003148305 A1	07-08-2003